

May 29, 2000

To: Derek Matory, US EPA

From: Nancy Frazier, TDSF

**Subject: Mid-State Plating
Nashville, Davidson County, TN
TDSF Site No. 19-572
CERCLIS No. TND004046033**

RE: PA SCORE Rescore

Tennessee Division of Superfund reviewed the PA Score completed in 1995. Scoring errors were identified in the surface water section. Additionally, TDSF personnel sampled adjacent residential soils and determined a contact hazard does not exist.

1. Surface Water Pathway. The score assumed a release to surface water. In reality the contaminant onsite is metals and the distance to perennial water is greater than 500 feet. It is not assumed the metals have traveled overland 500 feet. Therefore the potential to impact surface water should be No Suspected Release. The environmental threat targets was in error reporting a primary sensitive environment which should have been secondary. The drinking water threat for a secondary target factor value should have been a 2 instead the PA reported 1,633 the factor value for a body of water with a 10 to 100 cfs flow. In reality the flow of the river is greater than 10,000 cfs.

The new score for the surface water pathway should be:

Likelihood of release = 500

Waste Characteristics = 18

Targets: Drinking water = 2, (WC) 18, (LR) 500 = 0.2

Environmental = 10, (WC) 18, (LR) 500 = 1.1

Food Chain = 210, (WC) 18, (LR) 500 = 23

Corrected Surface Water Pathway Score is 24.3

2. The soil exposure pathway assumed contamination on 35 residents. The TDSF has sampled the eight residential properties adjacent to the facility. The results indicated metals below EPA soils screening levels. I have attached the most recent sampling of three additional residents that are downgradient to the facility to augment sample results you already have.

The new score for soil exposure should be:

Likelihood of release = 0

Waste Characteristics = 18

Targets = 35

New Soil Exposure Pathway Score = 0

Pathways= GW (1), SW (24.3), Soil (0), Air (8), New Site Score= 12.8



10459749

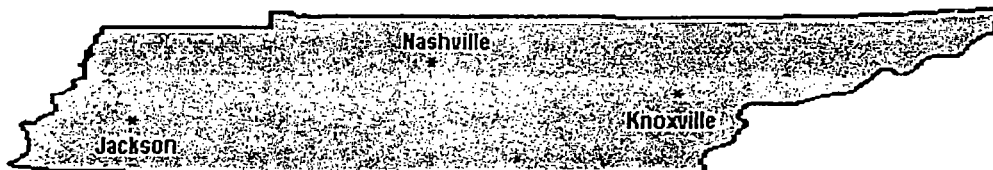
19-572

NEF 5/29

BKA

copy c.c.v

File



STATE OF TENNESSEE

ENVIRONMENTAL LABORATORIES

JACKSON LABORATORY
295 SUMMAR AVENUE
JACKSON, TN 38302-0849
PH: (901)423-6600

NASHVILLE LABORATORY
630 HART LANE
NASHVILLE, TN 37247-0801
PH: (615)262-6300

KNOXVILLE LABORATORY
1522 CHEROKEE TRAIL
KNOXVILLE, TN 37920
PH: (423)549-5201

SENT **HWM-STATE SUPERFUND, NFO**
TO: **537 BRICK CHURCH PARK DRIVE**
NASHVILLE, TN 37243-1550

NANCY FRAZIER
(615)741-7391

Lab ID: **0004222**
Sampling Agency: **HWM_05_NFO**

Billing Code: **327.38-05**



This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

Craig Edwards

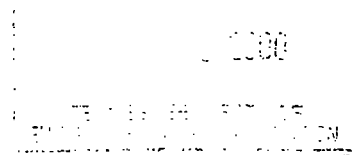
Analytical Supervisor

L. Satterwhite

Definition of Data Qualifiers

- U- Analyte requested but not detected
- J- Estimated value--result is less than sample quantitation limit but greater than zero
- B- Analyte in blank as well as sample
- E- Analyte concentration exceeds the calibration range of instrument
- N- Uncertainty in result other than "J" flag
- X,Y,Z- Other flags used to define results as needed
- Q- Received out of holding time

Printed: May 8, 2000



Project/Site No.: 19-572
 Project Name: MID-STATE PLATING CO.
 Description: NEAR FENCE@PROPERTY LINE
 Station No.: MSP-SS-03
 Collected: 04/27/00 10:30:00 By NF
 County: 19

Lab Number: 0004222-01
 Matrix: SOIL
 Received: 04/27/00 12:00:00 By RLC
 Sampling Agency: HWM_05_NFO
 Priority:

TEST	RESULT	UNITS	LIMIT	ANALYZED	BY	METHOD
ALUMINUM	11700	mg/kg	10	05/03/00	MP	200.7/6010
ANTIMONY	U	mg/kg	2.0	05/03/00	MP	200.7/6010
ARSENIC	5	mg/kg	2.0	05/03/00	MP	200.7/6010
BARIUM	214	mg/kg	10	05/03/00	MP	200.7/6010
BERYLLIUM	0.6	mg/kg	0.1	05/03/00	MP	200.7/6010
CADMIUM	1.4	mg/kg	0.1	05/03/00	MP	200.7/6010
CALCIUM	6110	mg/kg	200	05/03/00	MP	200.7/6010
COBALT	10	mg/kg	0.2	05/03/00	MP	200.7/6010
COPPER	26.1	mg/kg	0.1	05/03/00	MP	200.7/6010
DIGESTION-METALS	COMPLETED	COMPLETED		05/02/00	ATB	
IRON	21700	mg/kg	2.5	05/03/00	MP	200.7/6010
LEAD	85.6	mg/kg	0.3	05/03/00	MP	200.7/6010
MAGNESIUM	866	mg/kg	2	05/03/00	MP	200.7/6010
MANGANESE	1210	mg/kg	0.5	05/03/00	MP	200.7/6010
MERCURY	0.39	mg/kg	0.1	05/05/00	ATB	EPA 245.5
METALS PREP-SOLIDS/WASTES	COMPLETED	COMPLETED		05/02/00	ATB	
NICKEL	40	mg/kg	1	05/03/00	MP	200.7/6010
PERCENT SOLIDS	79.0	%		05/02/00	ATB	
POTASSIUM	2380	mg/kg	30	05/03/00	MP	200.7/6010
SELENIUM	U	mg/kg	2.0	05/03/00	MP	200.7/6010
SILVER	U	mg/kg	0.1	05/03/00	MP	200.7/6010
SODIUM	U	mg/kg	10	05/03/00	MP	200.7/6010
THALLIUM	U	mg/kg	1.0	05/03/00	MP	200.7/6010

Project/Site No.: 19-572
Project Name: MID-STATE PLATING CO.
Description: NEAR FENCE@PROPERTY LINE
Station No.: MSP-SS-03
Collected: 04/27/00 10:30:00 By NF
County: 19

Lab Number: 0004222-01
Matrix: SOIL
Received: 04/27/00 12:00:00 By RLC
Sampling Agency: HWM_05_NFO
Priority:

TEST	RESULT	UNITS	LIMIT	ANALYZED	BY	METHOD
TOTAL CHROMIUM	46	mg/kg	0.1	05/03/00	MP	200.7/6010
VANADIUM	23.4	mg/kg	0.2	05/03/00	MP	200.7/6010
ZINC	307	mg/kg	0.1	05/03/00	MP	200.7/6010

Project/Site No.: 19-572
 Project Name: MID-STATE PLATING CO.
 Description: BEHIND SHED@STRUCTURE
 Station No.: MSP-SS-02
 Collected: 04/27/00 10:20:00 By PF
 County: 19

Lab Number: 0004222-02
 Matrix: SOIL
 Received: 04/27/00 12:00:00 By RLC
 Sampling Agency: HWM_05_NFO
 Priority:

TEST	RESULT	UNITS	LIMIT	ANALYZED	BY	METHOD
ALUMINUM	10100	mg/kg	10	05/03/00	MP	200.7/6010
ANTIMONY	U	mg/kg	2.0	05/03/00	MP	200.7/6010
ARSENIC	4	mg/kg	2.0	05/03/00	MP	200.7/6010
BARIUM	179	mg/kg	10	05/03/00	MP	200.7/6010
BERYLLIUM	0.5	mg/kg	0.1	05/03/00	MP	200.7/6010
CADMIUM	1.8	mg/kg	0.1	05/03/00	MP	200.7/6010
CALCIUM	5340	mg/kg	200	05/03/00	MP	200.7/6010
COBALT	8.8	mg/kg	0.2	05/03/00	MP	200.7/6010
COPPER	46	mg/kg	0.1	05/03/00	MP	200.7/6010
DIGESTION-METALS	COMPLETED	COMPLETED		05/02/00	ATB	
IRON	16890	mg/kg	2.5	05/03/00	MP	200.7/6010
LEAD	46	mg/kg	0.3	05/03/00	MP	200.7/6010
MAGNESIUM	715	mg/kg	2	05/03/00	MP	200.7/6010
MANGANESE	1000	mg/kg	0.5	05/03/00	MP	200.7/6010
MERCURY	0.19	mg/kg	0.1	05/05/00	ATB	EPA 245.5
METALS PREP-SOLIDS/WASTES	COMPLETED	COMPLETED		05/02/00	ATB	
NICKEL	153	mg/kg	1	05/03/00	MP	200.7/6010
PERCENT SOLIDS	79.9	%		05/02/00	ATB	
POTASSIUM	2350	mg/kg	30	05/03/00	MP	200.7/6010
SELENIUM	U	mg/kg	2.0	05/03/00	MP	200.7/6010
SILVER	U	mg/kg	0.1	05/03/00	MP	200.7/6010
SODIUM	U	mg/kg	10	05/03/00	MP	200.7/6010
THALLIUM	U	mg/kg	1.0	05/03/00	MP	200.7/6010

Project/Site No.: 19-572
 Project Name: MID-STATE PLATING CO.
 Description: NEAR FENCE B/T SHED & GRILL
 Station No.: MSP-SS-01
 Collected: 04/27/00 10:00:00 By PF
 County: 19

Lab Number: 0004222-03
 Matrix: SOIL
 Received: 04/27/00 12:00:00 By RLC
 Sampling Agency: HWM_05_NFO
 Priority:

TEST	RESULT	UNITS	LIMIT	ANALYZED	BY	METHOD
ALUMINUM	9590	mg/kg	10	05/03/00	MP	200.7/6010
ANTIMONY	U	mg/kg	2.0	05/03/00	MP	200.7/6010
ARSENIC	14	mg/kg	2.0	05/03/00	MP	200.7/6010
BARIUM	203	mg/kg	10	05/03/00	MP	200.7/6010
BERYLLIUM	0.5	mg/kg	0.1	05/03/00	MP	200.7/6010
CADMIUM	2.2	mg/kg	0.1	05/03/00	MP	200.7/6010
CALCIUM	5400	mg/kg	200	05/03/00	MP	200.7/6010
COBALT	8	mg/kg	0.2	05/03/00	MP	200.7/6010
COPPER	21.5	mg/kg	0.1	05/03/00	MP	200.7/6010
DIGESTION-METALS	COMPLETED	COMPLETED		05/02/00	ATB	
IRON	15500	mg/kg	2.5	05/03/00	MP	200.7/6010
LEAD	55	mg/kg	0.3	05/05/00	MP	200.7/6010
MAGNESIUM	816	mg/kg	2	05/03/00	MP	200.7/6010
MANGANESE	1000	mg/kg	0.5	05/03/00	MP	200.7/6010
MERCURY	0.28	mg/kg	0.1	05/05/00	ATB	EPA 245.5
METALS PREP-SOLIDS/WASTES	COMPLETED	COMPLETED		05/02/00	ATB	
NICKEL	44	mg/kg	1	05/03/00	MP	200.7/6010
PERCENT SOLIDS	82.4	%		05/02/00	ATB	
POTASSIUM	2930	mg/kg	30	05/03/00	MP	200.7/6010
SELENIUM	U	mg/kg	2.0	05/03/00	MP	200.7/6010
SILVER	U	mg/kg	0.1	05/03/00	MP	200.7/6010
SODIUM	U	mg/kg	10	05/03/00	MP	200.7/6010
THALLIUM	U	mg/kg	1.0	05/03/00	MP	200.7/6010

Project/Site No.: 19-572
Project Name: MID-STATE PLATING CO.
Description: BEHIND SHED@STRUCTURE
Station No.: MSP-SS-02
Collected: 04/27/00 10:20:00 By PF
County: 19

Lab Number: 0004222-02
Matrix: SOIL
Received: 04/27/00 12:00:00 By RLC
Sampling Agency: HWM_05_NFO
Priority:

TEST	RESULT	UNITS	LIMIT	ANALYZED	BY	METHOD
TOTAL CHROMIUM	99.3	mg/kg	0.1	05/03/00	MP	200.7/6010
VANADIUM	20.2	mg/kg	0.2	05/03/00	MP	200.7/6010
ZINC	231	mg/kg	0.1	05/03/00	MP	200.7/6010

Project/Site No.: 19-572
Project Name: MID-STATE PLATING CO.
Description: NEAR FENCE B/T SHED & GRILL
Station No.: MSP-SS-01
Collected: 04/27/00 10:00:00 By PF
County: 19

Lab Number: 0004222-03
Matrix: SOIL
Received: 04/27/00 12:00:00 By RLC
Sampling Agency: HWM_05_NFO
Priority:

TEST	RESULT	UNITS	LIMIT	ANALYZED	BY	METHOD
TOTAL CHROMIUM	35.8	mg/kg	0.1	05/03/00	MP	200.7/6010
VANADIUM	18.4	mg/kg	0.2	05/03/00	MP	200.7/6010
ZINC	194	mg/kg	0.1	05/03/00	MP	200.7/6010



PROJECT/SITE NO. 19-572 PROJECT NAME Mid-State Plating Co.
STATION NUMBER MSP-55-08 COUNTY Davidson
DESCRIPTION Surface Soil near fence @ property line of hwy
STREAM MILE DEPTH 0-6" MATRIX Soil
COLLECTED: DATE 4/27/00 TIME 10:30 AM
SAMPLER'S NAME (printed) Pamela Franklin
SAMPLING AGENCY DSF BILLING CODE 327.38.05
IF PRIORITY, DATE NEEDED
SEND REPORT TO: Nancy Frazier, DSF
Nashville EAC
CONTACT HAZARD unknown

* Env. Microbiology	* General Inorganics	Gen. Inorganics (cont)
coliform, fecal*	acidity as CaCO ₃ *	oil and grease
coliform, total*	alkalinity as CaCO ₃ *	orthophosphate, total*
strep, fecal*	alkalinity, phen. as CaCO ₃ *	oxygen, dissolved*
E. Coli*	BOD, 5-day*	pH
Enterococcus*	CBOD, 5-day*	phenols, total
	boron	phosphate, total
* Ambient Parameters	chloride*	residue, dissolved*
COD*	chlorine, residual*	residue, settleable*
coliform, fecal	chromium, hexavalent	residue, suspended*
conductivity*	COD*	residue, total*
hardness, total as CaCO ₃ *	color, apparent*	silica*
nitrogen, ammonia	color, true*	sulfate*
nitrogen, NO ₃ & NO ₂	conductivity*	sulfide, total*
nitrogen, total Kjeldahl	cyanide	TOC*
phosphate, total	flash point*	turbidity*
pH	fluoride*	percent solids
residue, dissolved*	hardness, Ca as CaCO ₃ *	* Asbestos
residue, suspended*	hardness, total as CaCO ₃ *	bulk asbestos
arsenic, As	hydrocarbons, total	other microscopic
cadmium, Cd	MBAS*	
chromium, Cr	nitrogen, ammonia	* Other
copper, Cu	nitrogen, nitrate*	
lead, Pb	nitrogen, nitrite*	
mercury, Hg	nitrogen, NO ₃ & NO ₂	
nickel, Ni	nitrogen, total Kjeldahl	
zinc, Zn	nitrogen, total organic	

* denotes analyses performed only on water

FIELD DETERMINATIONS	Temperature
pH	Chlorine, residual
Conductivity	Other
Dissolved Oxygen	

* Metals
aluminum, Al
antimony, Sb
arsenic, As
barium, Ba
beryllium, Be
cadmium, Cd
calcium, Ca
chromium, Cr
cobalt, Co
copper, Cu
iron, Fe
lead, Pb
magnesium, Mg
manganese, Mn
mercury, Hg
nickel, Ni
potassium, K
selenium, Se
silver, Ag
sodium, Na
thallium, Tl
vanadium, V
zinc, Zn
* TCLP
arsenic, As
barium, Ba
cadmium, Cd
chromium, Cr
lead, Pb
mercury, Hg
nickel, Ni
selenium, Se
silver, Ag

Laboratory Number 00-04-222-01A
Branch Lab Number

Chain of Custody and Supplemental Information

Only one chain of custody form is required per sample set or point (if all collected at the same time)

1. Collected by P. Franklin
Date 4/27/00 Time 10:30 AM
Delivered to

2. Received by
Date Time

Delivered to
Date Time

3. Received by
Date Time

Delivered to
Date Time

4. Received in Lab by B. Apple
Date 4-27-00 Time 12:00

Logged in by
Date Time

Additional Information
1. Approximate volume of sample 16 oz

2. Nearest town or city Nashville

3. Others present at collection B. Apple

4. Number of other samples collected at same time at this point - 0 -

5. Field collection procedure, handling and/or preservation of this sample EPA protocol

6. Mode of transportation to lab state vehicle

7. Sample sealed by P. Franklin

8. Date sample sealed 4/27/00

9. Remarks



PROJECT/SITE NO. 19-512 PROJECT NAME Mid-state Paving Co
STATION NUMBER MSP-55-02 COUNTY Davidson
DESCRIPTION Surface Soil behind shed @ E of structure
STREAM MILE _____ DEPTH 0-6" MATRIX Soil
COLLECTED: DATE 4/27/00 TIME 1020 AM
SAMPLER'S NAME (printed) Pamela Franklin
SAMPLING AGENCY DSF BILLING CODE 327.38.05
IF PRIORITY, DATE NEEDED _____
SEND REPORT TO: Nancy Frazier, DSF
Nashville EAC
CONTACT HAZARD unknown

Metals	
aluminum, Al	
antimony, Sb	
arsenic, As	
barium, Ba	
beryllium, Be	
cadmium, Cd	
calcium, Ca	
chromium, Cr	
cobalt, Co	
copper, Cu	
iron, Fe	
lead, Pb	
magnesium, Mg	
manganese, Mn	
mercury, Hg	
nickel, Ni	
potassium, K	
selenium, Se	
silver, Ag	
sodium, Na	
thallium, Tl	
vanadium, V	
zinc, Zn	
TCLP	
arsenic, As	
barium, Ba	
cadmium, Cd	
chromium, Cr	
lead, Pb	
mercury, Hg	
nickel, Ni	
selenium, Se	
silver, Ag	

Laboratory Number 00-04-222-02A
Branch Lab Number _____

Chain of Custody and Supplemental Information

Only one chain of custody form is required per sample set or point (if all collected at the same time)
1. Collected by P. Franklin
Date 4/27/00 Time 1020 AM
Delivered to _____
Date _____ Time _____
2. Received by _____
Date _____ Time _____
Delivered to _____
Date _____ Time _____
3. Received by _____
Date _____ Time _____
Delivered to _____
Date _____ Time _____
4. Received in Lab by B. Apple
Date 4-27-00 Time 12:00
Logged in by _____
Date _____ Time _____

Additional Information

1. Approximate volume of sample 1602
2. Nearest town or city Nashville
3. Others present at collection B. Apple
4. Number of other samples collected at same time at this point 0
5. Field collection procedure, handling and/or preservation of this sample EPA protocol
6. Mode of transportation to lab State vehicle
7. Sample sealed by P. Franklin
8. Date sample sealed 4/27/00
9. Remarks _____

Env. Microbiology	General Inorganics	Gen. Inorganics (cont)
coliform, fecal*	acidity as CaCO ₃ *	oil and grease
coliform, total*	alkalinity as CaCO ₃ *	orthophosphate, total*
strep, fecal*	alkalinity, phen. as CaCO ₃ *	oxygen, dissolved*
E. Coli*	BOD, 5-day*	pH
Enterococcus*	CBOD, 5-day*	phenols, total
	boron	phosphate, total
* Ambient Parameters	chloride*	residue, dissolved*
COD*	chlorine, residual*	residue, settleable*
coliform, fecal	chromium, hexavalent	residue, suspended*
conductivity*	COD*	residue, total*
hardness, total as CaCO ₃ *	color, apparent*	silica*
nitrogen, ammonia	color, true*	sulfate*
nitrogen, NO ₃ & NO ₂	conductivity*	sulfide, total*
nitrogen, total Kjeldahl	cyanide	TOC*
phosphate, total	flash point*	turbidity*
pH	fluoride*	percent solids
residue, dissolved*	hardness, Ca as CaCO ₃ *	* Asbestos
residue, suspended*	hardness, total as CaCO ₃ *	bulk asbestos
arsenic, As	hydrocarbons, total	other microscopic
cadmium, Cd	MBAS*	
chromium, Cr	nitrogen, ammonia	* Other
copper, Cu	nitrogen, nitrate*	
lead, Pb	nitrogen, nitrite*	
mercury, Hg	nitrogen, NO ₃ & NO ₂	
nickel, Ni	nitrogen, total Kjeldahl	
zinc, Zn	nitrogen, total organic	

* denotes analyses performed only on water

FIELD DETERMINATIONS	Temperature
pH	Chlorine, residual
Conductivity	Other
Dissolved Oxygen	



Inorganic Analysis

PROJECT/SITE NO. 19-572 PROJECT NAME Mid-Stride Plecting Co.
STATION NUMBER MSP-S3-01 COUNTY Davidson
DESCRIPTION Surface Soil near fence between shed & grill
STREAM MILE DEPTH 0-6" MATRIX Soil
COLLECTED: DATE 4/27/00 TIME 1000 Am
SAMPLER'S NAME (printed) Pamela Franklin
SAMPLING AGENCY DSF BILLING CODE 327.38.05
IF PRIORITY, DATE NEEDED
SEND REPORT TO: Nancy Frazier, DSF
Nashville, EAC
CONTACT HAZARD unknown

* Env. Microbiology	* General Inorganics	* Gen. Inorganics (cont)
coliform, fecal*	acidity as CaCO ₃ *	oil and grease
coliform, total*	alkalinity as CaCO ₃ *	orthophosphate, total*
strep, fecal*	alkalinity, phen. as CaCO ₃ *	oxygen, dissolved*
E. Coli*	BOD, 5-day*	pH
Enterococcus*	CBOD, 5-day*	phenols, total
	boron	phosphate, total
* Ambient Parameters	chloride*	residue, dissolved*
COD*	chlorine, residual*	residue, settleable*
coliform, fecal	chromium, hexavalent	residue, suspended*
conductivity*	COD*	residue, total*
hardness, total as CaCO ₃ *	color, apparent*	silica*
nitrogen, ammonia	color, true*	sulfate*
nitrogen, NO ₃ & NO ₂	conductivity*	sulfide, total*
nitrogen, total Kjeldahl	cyanide	TOC*
phosphate, total	flash point*	turbidity*
pH	fluoride*	percent solids
residue, dissolved*	hardness, Ca as CaCO ₃ *	* Asbestos
residue, suspended*	hardness, total as CaCO ₃ *	bulk asbestos
arsenic, As	hydrocarbons, total	other microscopic
cadmium, Cd	MBAS*	
chromium, Cr	nitrogen, ammonia	* Other
copper, Cu	nitrogen, nitrate*	
lead, Pb	nitrogen, nitrite*	
mercury, Hg	nitrogen, NO ₃ & NO ₂	
nickel, Ni	nitrogen, total Kjeldahl	
zinc, Zn	nitrogen, total organic	

* denotes analyses performed only on water

FIELD DETERMINATIONS	Temperature
pH	Chlorine, residual
Conductivity	Other
Dissolved Oxygen	

* Metals
aluminum, Al
antimony, Sb
arsenic, As
barium, Ba
beryllium, Be
cadmium, Cd
calcium, Ca
chromium, Cr
cobalt, Co
copper, Cu
iron, Fe
lead, Pb
magnesium, Mg
manganese, Mn
mercury, Hg
nickel, Ni
potassium, K
selenium, Se
silver, Ag
sodium, Na
thallium, Tl
vanadium, V
zinc, Zn
* TCLP
arsenic, As
barium, Ba
cadmium, Cd
chromium, Cr
lead, Pb
mercury, Hg
nickel, Ni
selenium, Se
silver, Ag

Laboratory Number 00-04-222-03A
Branch Lab Number

Chain of Custody and Supplemental Information

Only one chain of custody form is required per sample set or point (if all collected at the same time)

1. Collected by PR Franklin
Date 4/27/00 Time 1000 Am

Delivered to

Date Time

2. Received by

Date Time

Delivered to

Date Time

3. Received by

Date Time

Delivered to

Date Time

4. Received in Lab by R. Corley

Date 4-27-00 Time 12:00

Logged in by

Date Time

Additional Information

1. Approximate volume of sample 16 oz

2. Nearest town or city Nashville

3. Others present at collection B. Apple

4. Number of other samples collected at same time at this point

- 0 -

5. Field collection procedure, handling and/or preservation of this sample

EPA protocol

6. Mode of transportation to lab

State vehicle

7. Sample sealed by PR Franklin

8. Date sample sealed 4/27/00

9. Remarks